



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,685	04/17/2001	Jefferson E. Odhner	LUC 2-026-3	7184

7590

02/06/2003

Diane E. Burke
Mueller and Smith, LPA
Mueller-Smith Building
7700 Rivers Edge Drive
Columbus, OH 43235

EXAMINER

LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
----------	--------------

2872

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,685

Applicant(s)

ODHNER ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- Th MAILING DATE of this communication appears on th cover sheet with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2002 and 15 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,17 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,17 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. The Examiner notes that the Applicant has met the requirements of claiming domestic priority under 35 U.S.C. 120.

Information Disclosure Statement

2. The information disclosure statement filed 12/23/02 fails to comply with 37 CFR 1.97(c) because it lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered.
3. The information disclosure statement filed 12/23/02 fails to comply with 37 CFR 1.97(c) because it lacks the fee set forth in 37 CFR 1.17(p). It has been placed in the application file, but the information referred to therein has not been considered.

Response to Amendment

4. The amendments to the specification of the disclosure in Paper No. 6, dated 12/23/02, are acknowledged and accepted.
5. The cancellation of Claims 2, 4-16, 18-31, 33-39 in Paper No. 6, dated 12/23/02, are acknowledged and accepted.
6. The amendments to Claims 1, 3, 17, and 32 in Paper No. 6, dated 12/23/02, are acknowledged and accepted.

7. The remarks submitted in Paper No. 7, dated 1/15/03, are acknowledged and have been considered in conjunction with the remarks made in Paper No. 6, dated 12823/02.

Response to Arguments

8. The Applicants argue that Bernstein fails to teach or reasonably suggest the movable diffractive optical element having a surface carrying a holographic diffraction grating including an array of facets, each of said facets carrying a diffraction grating(s) which are superimposed, each being angularly offset with respect to each other. The Examiner agrees, and respectfully withdraws the 35 U.S.C. 102(e) rejections to Claims 1, 3, 17, 31, and 32.
9. The Applicants argue that Kompfner fails to teach or reasonably suggest a diffractive optical element having a surface carrying a holographic diffraction grating including an array of facets, each of said facets carrying a diffraction grating(s) which are superimposed, each being angularly offset with respect to each other. The Examiner respectfully disagrees. Kompfner specifically states, particularly in the first form of the recited optical system, that the single phase grating plate includes a series of volume phase gratings (See col. 1, lines 39-54). Each of these phase gratings (i.e. each of these facets) would necessarily have to be at an angular offset with respect to each other given the angular sensitivity of such phase gratings and the optical connection scheme utilized in Figure 2 (See also col. 1, line 55-col. 2, line 23; col. 4, line 54-col. 5, line 5).
10. The Applicants argue that Odhner et al. fails to teach analogous art with respect to that of Kompfner. The Examiner respectfully agrees. However, in the rejection, the

Art Unit: 2872

Examiner noted that Kompfner failed to teach the diffractive optical element having a magnet and being a movable holographic diffraction grating attached to a magnet and magnetically coupled to a coil energizable for movement of the magnet and diffraction grating. Kompfner discloses moving an optical element (i.e. a mirror, 22 in Figure 2) using rotary actuation (See 25, 26 in Figure 2). The Examiner relied on Odhner et al. for utilizing magnetic actuation means of moving an optical element, in the instant case a holographic diffraction element. In both cases, a similar problem is being solved, i.e. movement of an optical element via an actuation means. However, the Applicants also argue that Odhner et al. fails to teach or reasonably suggest the diffraction grating being attached to the magnet. The Examiner agrees, and respectfully withdraws the 35 U.S.C. 103(a) rejections to Claims 1, 3, 17, 31, and 32. Claims 1, 3, 17, and 32 are rejected as stated below.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 3, 17, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kompfner in view of Mey et al.

Kompfner discloses a system and method for treating optical signals from a source (See Figures 2, 3A and 3B), comprising a source carrying input optical signals (See

optical fibers 112 in Figure 2), each of said signals being associated with a particular wavelength; a diffractive optical element (See 20 of Figure 2) having a surface carrying a holographic diffraction grating including an array of facets, each of the facets carrying a diffraction grating(s) which are superimposed, each being angularly offset with respect to each other, and positioned to intercept said input optical signals for generating and distributing output optical signals (See col. 1, line 39-54; col. 2, line 49-col. 3, line 18); and output stations positioned to receive said output optical signals from the movable diffractive optical element (See optical fibers 113 in Figure 2). Kompfner lacks the diffractive optical element having a magnet and the diffractive optical element being a movable holographic diffraction grating attached to the magnet and being magnetically coupled to a coil energizable for movement of the magnet and the diffraction grating. However, Mey et al. teaches a method and apparatus for moving a diffractive optical element (See Figures 1, 3, 4), comprising a magnet (See for example 72 in Figure 3) having a holographic diffraction element (See 26 in Figure 3) attached thereto, and being magnetically coupled to a coil (See col. 4, lines 7-49) energizable for movement of the magnet and diffraction grating. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a magnetically movable diffractive optical element, as taught by Mey et al., in the system and method for treating optical signals from a source, as disclosed by Kompfner. One would have been motivated to do this to utilize fewer moving parts, thus decreasing system complexity and cost, as well as reduce system start-up torque, thus reducing the amount of power required to operate the system.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM.

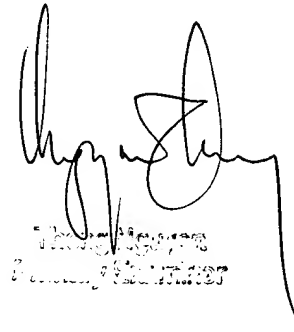
The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Art Unit: 2872

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias
February 4, 2003



RECEIVED
FEB 11 2003
FEB 11 2003